

REMARKS

Status of the Claims

Claims pending in the above-identified application are Claims 1-45. Claims 10-11, 15, 19, 28-29, 33, 37-39, and 43 are amended. Claims 1-9, 12-14, 16-18, 20-27, 30-32, 34-36, 40-42, and 44-45 are original. The amendments do not introduce new matter into this application. Support for the new amendments is found throughout the specification.

Status of the Specification

There was a typographical error listing the HLMI for Inventive Resin C as 811.9; it should have been 81.2. One of ordinary skill in the art would understand that the decimal point was misplaced, and with rounding, the HLMI for Inventive Resin C should read “81.2.” No new subject matter was introduced.

Claim Objections

Claims 1-3, 7-9, 20-24, 26, and 27 are objected to because of the terms “less than about” and “at least about.” Respectfully, Applicants traverse this objection.

According to MPEP § 2173.05(b)(A), “at least about” was held invalid for indefiniteness, in *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 18 U.S.P.Q.2d 1016 (Fed. Cir. 1991). However, the MPEP also notes that in the *Amgen* case, there was nothing in the specification regarding what range was covered, and there were limitations due to prior art and prosecution history. Further in *Amgen*, the court instructs the following, “[i]n arriving at this conclusion, we caution that our holding that the term ‘about’ renders indefinite claims 4 and 6 should not be understood as ruling out any and all uses of this term in patent claims. It may be acceptable in appropriate fact situations, e.g., *W.L. Gore & Associates...*, even though it is not here.” 927 F.2d at 1218, 18 U.S.P.Q.2d at 1031. Applicants assert that the facts and circumstances of the *Amgen* case are not analogous to the pending application.

Rather, Applicants contend that the meaning of at least about can be established from two Federal Circuit decisions, and is used consistently throughout the specification of the pending application. In *Merck & Co., Inc. v. Teva Pharmaceuticals USA, Inc.*, the court held that, absent specific language in the specification that redefines a term, a term should be construed with its ordinary or customary meaning. 395 F.3d 1364, 1369-1371 (Fed. Cir. 2005). Specifically, as it relates to the present invention, the court held that “the term ‘about’ should be given its ordinary and accepted meaning of ‘approximately.’ ” (Emphasis added). *Id.* at 1372.

The term at least approximately was defined by the court in *Quantum Corporation v. Rodime PLC*, 65 F.3d 1577 (Fed. Cir. 1995). “[T]he term ‘at least’ means ‘as the minimum,’ ...when coupled with a specific number sets forth an absolute lower limit of a range...” *Id.* at 1581. When combined with the term at least, the “addition of ‘approximately’ which means ‘reasonably close to,’ eliminates the precise lower limit of that range, and, in so doing extends the scope of that range. The term ‘at least approximately 600 tpi’ therefore defines an open-ended range starting slightly below 600.” *Id.* Similarly, Applicants assert that a phrase stating at least about 60% or less than about 50,000, as claimed, is permissible in view of *Merck* and *Quantum Corporation*.

Support for the use of this terminology in the specification of the pending application can be found, for example, on page 60, line 6, to page 61, line 4, and page 62, lines 10-21. Accordingly, Applicants respectfully request that this objection be withdrawn.

Rejections Under 35 USC § 112

The Patent and Trademark Office (“PTO”) rejected Claims 1-45 under 35 U.S.C. § 112, second paragraph, as follows:

(1) Claims 1-45 are rejected as being indefinite due to the term “tightly bridged” metallocene. Respectfully, this rejection is traversed. Tightly-bridged is defined in the specification on page 8, lines 18-24, as follows, “...the term tightly-bridged metallocene is used herein to describe a metallocene compound in which the two cyclopentadienyl-type

ligands in a molecule are linked by a bridging moiety, wherein the shortest chain of the bridging moiety comprises one or two atoms. Thus, the length of the bridge or chain between the two cyclopentadienyl-type ligands is one or two atoms, although these bridging atoms may be substituted by a variety of substituents such that the bridging moiety itself contains more than one of two atoms.” (Emphasis added). Accordingly, Applicants respectfully request that the rejection of Claims 1-45 be withdrawn.

(2) Claims 10-11, 28-29, and 38-39 are rejected due to substituents described as an “inorganic group” or an “organometallic group.” In view of the above amendments, Applicants assert that this rejection is obviated. Supports for the amendments can be found in the specification on page 22, lines 13-20. Accordingly, Applicants respectfully request that the rejection of Claims 10-11, 28-29, and 38-39 be withdrawn.

(3) Claims 19 and 37 are rejected due to the phrase “further comprising an optional.” Applicants assert that this rejection is obviated in view of the above amendments and respectfully request that this rejection be withdrawn.

Rejections Under 35 USC §§ 102 and 103

Claims 1-45 are rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,833,338 to McDaniel et al. (“*McDaniel '338*”). In view of the amendments to Claims 1, 20, and 38, Applicants respectfully assert that this rejection is obviated.

The PTO states that *McDaniel '338* discloses the same catalyst composition as that presented in the instant claims. The PTO states that *McDaniel '338* is silent on specific polymer film properties, but in view of the similar process, the copolymer properties would be similar. Applicants respectfully assert that the catalyst system used in *McDaniel '338* is not the same as the catalyst system employed to produce the polymers of the claimed invention. “The treated solid oxide compound comprises at least one halogen, titanium, and a solid oxide compound.” (Emphasis added). *McDaniel '338*, column 9, lines 48-49. See

also Claim 1 in *McDaniel* '338, on column 32, lines 19-20. *McDaniel* '338 is silent with respect to a chemically-treated solid oxide component in the absence of titanium.

Respectfully, it is well known to one of ordinary skill in the art that any change, whatsoever, in components of a catalyst system can give rise to substantially different polymer properties, such as density, melt index, high load melt index (HLMI), and polydispersity index (Mw/Mn), as well as film properties such as haze and clarity. Hence, the underlying premise that *McDaniel* '338 has the same catalyst system and thus would give similar polymer resin and film properties cannot be fairly concluded.

Thus, *McDaniel* '338 does not teach or suggest each and every element of the claimed invention. Accordingly, Applicants respectfully request that the rejection of Claims 1-45 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *McDaniel* '338, be withdrawn.

Claims 1-15, 20-33, and 36-43 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,376,415 to *McDaniel* et al. ("*McDaniel* '415"). In view of the amendments to Claims 1, 20, and 38, Applicants respectfully assert that this rejection is obviated.

The PTO states that *McDaniel* '415 discloses the same catalyst composition as that presented in the instant claims. The PTO states that *McDaniel* '415 is silent on specific polymer film properties, but in view of the similar process, the copolymer properties would be similar. Applicants respectfully assert that the catalyst system used in *McDaniel* '415 is not the same as the catalyst system employed to produce the polymers of the claimed invention. The treated solid oxide compound of *McDaniel* '415 comprises a halogen, a transition metal, and a solid oxide compound; the transition metal is tungsten or molybdenum. See *McDaniel* '415, on column 2, line 63, to column 3, line 2. See also column 10, lines 47-54. *McDaniel* '415 is silent with respect to a chemically-treated solid oxide component in the absence of tungsten or molybdenum.

Respectfully, it is well known to one of ordinary skill in the art that any change, whatsoever, in components of a catalyst system can give rise to substantially different

polymer properties, such as density, melt index, high load melt index (HLMI), and polydispersity index (Mw/Mn), as well as film properties such as haze and clarity. Hence, the underlying premise that *McDaniel* '415 has the same catalyst system and thus would give similar polymer resin and film properties cannot be fairly concluded.

Thus, *McDaniel* '415 does not teach or suggest each and every element of the claimed invention. Accordingly, Applicants respectfully request that the rejection of Claims 1-15, 20-33, and 36-45 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *McDaniel* '415, be withdrawn.

Claims 1-45 are rejected under 35 U.S.C. § 102(a) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,613,852 to *McDaniel* et al. ("*McDaniel* '852"). Respectfully, this rejection is traversed.

The PTO states that *McDaniel* '852 discloses a process and catalyst composition similar to that presented in the instant claims. The PTO states that *McDaniel* '852 is silent on specific polymer film properties, but in view of the similar process, the copolymer properties would be similar. Applicants respectfully disagree. As disclosed in Claims 1 and 20 of the present invention, for example, the method of polymerizing olefins comprises a catalyst composition which comprises "the contact product of at least one tightly-bridged metallocene compound, at least one organoaluminum compound; and at least one chemically-treated solid oxide..." (Emphasis added). Copolymers resins are produced which, upon converting to film, have high film haze and low film clarity.

In columns 4-9, *McDaniel* '852 discloses nineteen (19) representative metallocene compounds, ten (10) of which are bridged, and nine (9) of which are unbridged. *McDaniel* '852 does not offer any suggestion as to which particular metallocene compounds, bridged or otherwise, should be chosen to produce the copolymer films with the specific properties of the present invention, e.g., high film haze and low film clarity. "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full

appreciation of what such reference fairly suggests to one of ordinary skill in the art.” *In re Wesslau*, 353 F.2d 238, 241, 147 U.S.P.Q. 391, 393 (C.C.P.A. 1965).

Further, as defined in the specification of the present application on page 8, lines 18-24, “...the term tightly-bridged metallocene is used herein to describe a metallocene compound in which the two cyclopentadienyl-type ligands in a molecule are linked by a bridging moiety, wherein the shortest chain of the bridging moiety comprises one or two atoms. Thus, the length of the bridge or chain between the two cyclopentadienyl-type ligands is one or two atoms, although these bridging atoms may be substituted by a variety of substituents such that the bridging moiety itself contains more than one or two atoms.” *McDaniel '852* does not offer any suggestion as to how to pick or choose a specific tightly-bridged metallocene to produce the copolymer films with the specific properties of the present invention. Although *McDaniel '852* discloses several tightly-bridged metallocene on columns 4-9, *McDaniel '852* also discloses that “[s]uitable bridging groups include, but are not limited to, aliphatic groups, cyclic groups, combinations of aliphatic groups and cyclic groups, phosphorous groups, nitrogen groups, organometallic groups, silicon, phosphorous, boron, and germanium.” Column 4, lines 26-30.

Hence, *McDaniel '852* does not teach or suggest (1) how to choose a bridged metallocene and not an unbridged metallocene, and (2) how to choose a tightly-bridged metallocene, in order to produce copolymers with the specific properties of the claimed invention. Respectfully, Applicants assert that a *prima facie* case of obviousness has not been made. Accordingly, Applicants respectfully request that the rejection of Claims 1-45 under 35 U.S.C. § 102(a) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *McDaniel '852*, be withdrawn.

Rejections Based on Obviousness-Type Double Patenting

Claims 38-45 are *provisionally* rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 4, 6, 8, and 18-22 of co-pending Application No. 10/720,024. Applicants assert that this provisional rejection is

obviated in view of the claim amendments in Application No. 10/720,024 and respectfully request that this rejection be withdrawn.

Claims 1, 10-20 and 28-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-6 of *McDaniel '852*. Respectfully, this rejection is traversed.

The PTO states that *McDaniel '852* claims a process and catalyst composition similar to that presented in the instant claims. The PTO states that *McDaniel '852* is silent on specific polymer film properties, but in view of the similar process, the copolymer properties would be similar. Applicants respectfully disagree. As disclosed in Claims 1 and 20 of the present invention, for example, the method of polymerizing olefins comprises a catalyst composition which comprises "the contact product of at least one tightly-bridged metallocene compound, at least one organoaluminum compound, and at least one chemically-treated solid oxide..." (Emphasis added). Copolymers resins are produced which, upon converting to film, have high film haze and low film clarity.

Claim 1 of *McDaniel '852* discloses that the metallocene can be bridged, but does not suggest which particular metallocene compounds, bridged or otherwise, should be chosen to produce the copolymer films with the specific properties of the present invention, e.g., high film haze and low film clarity. "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Wesslau*, 353 F.2d 238, 241, 147 U.S.P.Q. 391, 393 (C.C.P.A. 1965).

Further, as defined in the specification of the present application on page 8, lines 18-24, "...the term tightly-bridged metallocene is used herein to describe a metallocene compound in which the two cyclopentadienyl-type ligands in a molecule are linked by a bridging moiety, wherein the shortest chain of the bridging moiety comprises one or two atoms. Thus, the length of the bridge or chain between the two cyclopentadienyl-type ligands is one or two atoms, although these bridging atoms may be substituted by a variety of

substituents such that the bridging moiety itself contains more than one of two atoms.” *McDaniel* ‘852 does not suggest how to pick or choose a specific tightly-bridged metallocene to produce the copolymer films with the specific properties of the present invention. *McDaniel* ‘852 does not define “bridging group” in the claims. In the specification, *McDaniel* ‘852 discloses several tightly-bridged metallocene on columns 4-9, but also discloses that “[s]uitable bridging groups include, but are not limited to, aliphatic groups, cyclic groups, combinations of aliphatic groups and cyclic groups, phosphorous groups, nitrogen groups, organometallic groups, silicon, phosphorous, boron, and germanium.” Column 4, lines 26-30.

Hence, the claims of *McDaniel* ‘852 do not teach or suggest (1) how to choose a bridged metallocene and not an unbridged metallocene, and (2) how to choose a tightly-bridged metallocene, in order to produce copolymers with the specific properties of the claimed invention. Respectfully, Applicants assert that a *prima facie* case of obviousness has not been made. Accordingly, Applicants respectfully request that the rejection of Claims 1, 10-20, and 28-37 under the judicially created doctrine of obviousness-type double patenting, as being unpatentable over Claims 1-6 of *McDaniel* ‘852, be withdrawn.

Information Disclosure Statement

Due to a typographical error, the serial number on the information disclosure statement (IDS) filed July 29, 2004, was incorrect. Attached herewith is a corrected IDS.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully assert that the rejections and objections as set forth in the Office Action have been fully addressed and overcome. Hence, Applicants assert that all Claims are in condition for allowance and request that an early notice of allowance be issued. If issues may be resolved through Examiner's Amendment, or clarified in any manner, a call to the undersigned attorney at (404) 879-2433 is respectfully requested.

No fees are believed due, however, the Commissioner if hereby authorized to charge any deficiencies which may be required, or credit any overpayment to Deposit Account No. 09-0528.

Respectfully submitted,



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